Index to feature articles Volume 163—Year 1979

Chemicals and chemistry

	Page	Issue
Application of cationic latex in the papermaking process—B. Alince	52	March 15
Buyer's guide to papermaking chemicals	30	Aug. 30
Can SBK washing increase drainage?—John G. Penniman	35	Aug. 15
Chemical survey: Cost consciousness high among papermakers, suppliers this year—Karen R. Boiko	25	Aug. 30
Common errors in chemistry optimization—John G. Penniman	37	May 15
Controlling pitch in southern newsprint by using alum to control zeta potential—John G. Penniman	32	July 15
Electrostatic charge in recycle systems—John G. Penniman	37	Oct. 15
First pass fines retention critical to efficiency of wet strength resin—Erland R. Sandstrom	47	Jan. 30
Identifying and quantifying 'anionic trash'—John G. Penniman	54	Nov. 15
More on the Britt Jar drainage test—John G. Penniman	41	Sept. 15
Study describes adsorption of cationic polymer on cellulose fiber—John G. Penniman	47	Dec. 15
Optimizing the process: an act of faith?—John G. Penniman	37	June 15
Outlook for U.S. chemical industry—Irving S. Shapiro	30	Dec. 30
Polyvinylidene fluoride proves to be efficient bleach plant corrosion fighter	38	Feb. 15
Should additives be positively charged? Readers respond to 'cationic' column—John G. Penniman	40	Feb. 15
Three experimental procedures for optimizing coagulation chemistry—John G. Penniman	30	Jan. 15
Unique 'dryness aid': cationic guar gum—John G. Penniman	62	March 15
Using the Britt Jar to measure drainage—John G. Penniman and Cynthia R. Olson	34	April 15

Conference reports

Alkaline pulping sessions feature closed-cycle bleaching and TMP (TAPPI)—Karen R. Boiko	30	Jan. 30
Canada aims $235-million program toward upgrading pulp/paper mills (CPA)—Jeremiah E. Flynn	26	March 30
Discussion of adhesives and shipping mark packaging program in Nashville (TAPPI)—Neal S. Lipschutz	40	Dec. 15
First oxygen pulping/bleaching seminar draws high attendance, good papers (TAPPI)—Karen R. Boiko	20	Feb. 28
Fundamental research—the key to future growth for the paper industry (Institute of Paper Chemistry)—Peter E. Wrist	65	June 30
The growing cost of health benefits—what can be done to slow the spiral? (API)—Neal S. Lipschutz	48	March 15
Kroeschell assumes TAPPI presidency at annual meeting	27	April 30
Management, science, technical sessions featured at TAPPI annual meeting	58	March 15
Speakers at NCASI forum urge industry to take lead in environmental debates—Rafael A. Suarez Jr.	31	April 30
On-line and off-line paper testing: different roles in improving quality (Miami University, Oxford, Ohio)—Neal S. Lipschutz	33	July 30
TAPPI talks on pollution abatement focus on air tests, water treatment (Environmental Conference)—Neal S. Lipschutz	31	July 30
TAPPI technical sessions in Houston focus on mill environmental problems (Environmental Conference)—Neal S. Lipschutz	28	July 15
Technical, economic sessions highlight PIMA meeting in San Francisco—Karen R. Boiko	27	Aug. 15
Turbulence on forming board may be critical, but often is inadequate: Kallmes (TAPPI annual meeting)	35	June 15

Economics, statistics & trends

Analysts forecast long-term trends in paper industry—Neal S. Lipschutz	32	April 15
Canada aims $235-million program toward upgrading pulp/paper mills—Jeremiah E. Flynn	26	March 30
Chemical survey: Cost consciousness high among papermakers, suppliers this year—Karen R. Boiko	25	Aug. 30
China's ambitious modernization plan holds promises and questions for U.S.—Neal S. Lipschutz	34	Oct. 15
Focus 1980: outlook for Canadian pulp and paper industry—Bruce Howe	27	Dec. 30
Focus 1980: paper industry earnings to dip, then surge—Clarence W. Brown	23	Dec. 30
Focus 1980: production to drop, while costs go higher in 1980—Thomas P. Clephane	25	Dec. 30
The growing cost of health benefits—what can be done to slow the spiral?—Neal S. Lipschutz	48	March 15
Growth through innovation: paper industry's best bet for a profitable future—Clarence W. Brown	20	Jan. 15
Market pulp: an overview—G. H. Peterson	50	Jan. 30
NAPM predicts some growth in 1979 despite possible mid-year recession—Neal S. Lipschutz	29	Jan. 15
Outlook for U.S. chemical industry—Irving S. Shapiro	30	Dec. 30
Overview of the European market: prosperity with some headaches—Jeremiah E. Flynn	28	Jan. 15
Paper industry wages and benefits—are the costs getting out of control?—Julian M. Kien	28	Feb. 28
Tax credit promises boost for paper recyclers, but no major changes seen—Neal S. Lipschutz	52	Jan. 30
Technical, economic sessions highlight PIMA meeting in San Francisco—Karen R. Boiko	27	Aug. 15
'Top 50': Paper industry sales/earnings potential is bullish into 1980—Jeremiah E. Flynn	31	June 30
The 'Top 50' papermakers (ranked in terms of papermaking sales)	44	June 30

Energy management

An industry update: state-of-the-art in on-line sensors for energy systems (Part 1)—Vigo N. Smith and Peter Typpo	38	Jan. 30
An industry update: state-of-the-art in on-line sensors for energy systems (Part 2)—Vigo N. Smith and Peter Typpo	28	Feb. 15
Can energy costs for TMP and RMP be reduced?—Joseph A. Kurdin	23	June 15
Controlling moisture on paper machines results in significant energy savings—Barclay W. Wallace	36	Nov. 15
Energy demands are cut by computer control of a mill's boiler complex (Part 1)—Charles M. Worthley	23	Aug. 15
Energy demands are cut by computer control of a mill's boiler complex (Part 2)—Charles M. Worthley	49	Aug. 30
Energy efficiency shows marked gains; tight oil supplies forecast for 1980s—Neal S. Lipschutz	32	April 30
Reduction of energy consumption via mill heat-recovery systems (Part 1)—Karl-Hugo Andersson	24	July 30

(*Continued on next page*)

(*Continued from preceding page*)

Reduction of energy consumption via mill heat recovery systems (Part 2)—Karl-Hugo Andersson ..... 30 Aug. 15
Redwood waste is energy source at Samoa complex of Louisiana-Pacific—Karen R. Boiko . 26 July 15

Environmental control

Alton mill's wastewater facility meets 1984 standards ..... 33 April 30
Disposal alternatives for solid wastes from a coal-fired boiler system—William Ellison and William R. Groff ..... 48 Nov. 15
Foul condensates are steam-stripped in-line at Nekoosa, kraft mill ..... 24 Feb. 15
Recycled liquid salt cake for pulping to be tried at Scott's Muskegon mill ..... 32 Jan. 15
Recycling of waxed waste materials while using conventional equipment—A. Von Koeppen and R. Carrera ..... 38 May 15
Reducing emissions of sulfur dioxide when a pulp mill switches to coal—William Ellison and William R. Groff ..... 32 Sept. 15
Scott's Mobile mill transports effluent under a creek in a unique effort at pollution control—Neal S. Lipschutz ..... 47 Nov. 30
Speakers at NCASI forum urge industry to take lead in environmental debates—Rafael A. Suarez Jr. ..... 31 April 30
TAPPI talks on pollution abatement focus on air tests, water treatment—Neal S. Lipschutz .. 31 July 30
TAPPI technical sessions in Houston focus on mill environmental problems—Neal S. Lipschutz ..... 28 July 15
Thermal sludge conditioning with low pressure

Author index to 1979 features

Alince, B.—Application of cationic latex in the papermaking process. March 15, p. 52
Andersson, Karl-Hugo—Reduction of energy consumption via mill heat-recovery systems (Part 1). July 30, p. 24
————Reduction of energy consumption via mill heat recovery systems (Part 2). Aug. 15, p. 30

Bagnato, Louis J.—Relationship of winder production to the output of the paper machine. Nov. 15, p. 41
Bajwa, G. M.—and F. D. Toor—Pakistan's locally grown kenaf shows promise in laboratory pulping tests. May 15, p. 28
Beecher, Jess—and David Longstaff—Water treatment reduces pick-up of iron and copper in a kraft mill. Oct. 30, p. 38
Bell, Norman E.—and David P. Phibbs—Couch vacuum: how to optimize a neglected dewatering element. Nov. 30, p. 32
Boiko, Karen R.—Alkaline pulping sessions feature closed-cycle bleaching and TMP. Jan. 30, p. 30
————'Bugs' are gone at Rocklin MDF mill; former Fibreboard plant now profitable. Feb. 28, p. 18
————Chemical survey: Cost consciousness high among papermakers, suppliers this year. Aug. 30, p. 25
————First oxygen pulping/bleaching seminar draws high attendance, good papers. Feb. 28, p. 20
————Mead chairman James McSwiney named Papermaker of the Year. Dec. 15, Cover
————Recovery boiler training programs offer operating and maintenance guidelines. Nov. 30, p. 45
————Redwood waste is energy source at Samoa complex of Louisiana-Pacific. July 15, p. 26
————Technical, economic sessions highlight PIMA annual meeting in San Francisco. Aug. 15, p. 27
————Tomahawk project of Owens-Illinois wins API/NFPA management award. Sept. 30, p. 41
Brown, Clarence W.—Focus 1980: paper industry earnings to dip, then surge. Dec. 30, p. 23
————Growth through innovation: paper industry's best bet for a profitable future. Jan. 15, p. 20

Carrera, R.—and A. Von Koeppen—Recycling of waxed waste materials while using conventional equipment. May 15, p. 38
Clephane, Thomas P.—Focus 1980: production to drop, while costs go higher in 1980. Dec. 30, p. 27

Dyer, Harry L.—Saxon Industries extends lease on life of Missisquoi cylinder board mill. May 30, p. 59

Ellison, William—and William R. Groff—Disposal alternatives for solid wastes from a coal-fired boiler system. Nov. 15, p. 48
————Reducing emissions of sulfur dioxide when a pulp mill switches to coal. Sept. 15, p. 32

Flynn, Jeremiah E.—Black Clawson plans redesign of Verti-Forma. Feb. 15, Cover
————Bowater Southern expands newsprint capability with 487-tpd TMP plant. Sept. 15, p. 27
————Canada aims $235-million program toward upgrading pulp/paper mills. March 30, p. 26
————European/Asian markets targeted as output peaks at Alabama River. May 30, p. 34
————Fraser is on-stream at Edmundston mill with completion of $91-million project. Oct. 15, p. 24
————Optical flow transmitters can accurately measure and control pulp feed. March 30, p. 29
————Overview of the European market: prosperity with some headaches. Jan. 15, p. 28
————Southeast Paper goes on stream with 450 tpd of recycled newsprint. Sept. 30, p. 31
————'Top 50': Paper industry sales/earnings potential is bullish into 1980. June 30, p. 31

Groff, William R.—and William Ellison—Disposal alternatives for solid wastes from a coal-fired boiler system. Nov. 15, p. 48
————Reducing emissions of sulfur dioxide when a pulp mill switches to coal. Sept. 15, p. 32

Hartler, Nils—TMP as the sole mechanical pulp for newsprint and magazine grades. Dec. 15, p. 43
Hatton, J. V.—Screening of pulpwood chips for quality and profit. April 30, p. 25
Howe, Bruce—Focus 1980: outlook for Canadian pulp and paper industry. Dec. 30, p. 27

Kien, Julian M.—Paper industry wages and benefits—are the costs getting out of control? Feb. 28, p. 28
Killeen, Allen J.—Dri Press concept: a progress report based on performance in paper mills. Nov. 30, p. 39
Kramm, Douglas J.—Update on lime sludge kilns in the pulp mill environment (Part 1). May 15, p. 23
————Update on lime sludge kilns in the pulp mill environment (Part 2). May 30, p. 52
————Update on lime sludge kilns in the pulp mill environment (Part 3). June 15, p. 28
Kurdin, Joseph A.—Can energy costs for TMP and RMP be reduced? June 15, p. 23

Lapointe, A.—Domtar classifier accurately measures thickness and length of wood chips. April 30, p. 28
Lipschutz, Neal S.—Analysts forecast long-term trends in paper industry. April 15, p. 32
————China's ambitious modernization plan holds promises and questions for U.S. Oct. 15, p. 34
————Discussion of adhesives and shipping mark packaging program in Nashville. Dec. 15, p. 40
————Educational 'docudrama' produced by IP warns of hazards of antitrust violations. Dec. 15, p. 38
————Energy efficiency shows marked gains; tight oil supplies forecast for 1980s. April 30, p. 32
————Garden State Paper's newsprint mill uses old newspapers as raw material. Jan. 15, p. 18
————The growing cost of health benefits—what can be done to slow the spiral? March 15, p. 48
————NAPM predicts some growth in 1979 despite pos-

oxidiation ..... 34 May 15
Tomahawk project of Owens-Illinois wins API/NFPA management award—Karen R. Boiko 41 Sept. 30

Expansions and modernizations

Bowater Southern expands newsprint capability with 487-tpd TMP plant—Jeremiah E. Flynn 27 Sept. 15
Bruderhaus upgrades Haindl mill's finishing operation ..... 58 May 30
'Bugs' are gone at Rocklin MDF mill; former Fibreboard plant now profitable—Karen R. Boiko ..... 18 Feb. 28
Clevepak keeps mill at Piermont running on creative management and flair for adaptation—Rafael A. Suarez Jr. ..... 33 Oct. 30
Construction at Ashdown mill moves rapidly .. 34 July 15
European/Asian markets targeted as output peaks at Alabama River—Jeremiah E. Flynn ..... 34 May 30
Fraser is on-stream at Edmunston mill with completion of $91-million project—Jeremiah E. Flynn ..... 24 Oct. 15
Mead builds finishing operation featuring new sheeters for the Chillicothe, Ohio, mill—Rafael A. Suarez Jr. ..... 47 Oct. 30
Mill update: CIP expansion at Quebec liner mill completed ..... 33 July 15
Rebuild at Kvarnsveden boosts speed, improves quality ..... 36 June 15
Rebuild at Sonoco's Hartsville mill increases corrugating medium output—Neal S. Lipschutz 48 Sept. 30
Saxon Industries extends lease on life of Missisquoi cylinder board mill—Harry Dyer ..... 59 May 30
Southeast Paper goes on stream with 450 tpd of recycled newsprint—Jeremiah E. Flynn .... 31 Sept. 30

(*Continued on next page*)

sible mid-year recession. Jan. 15, p. 29
————On-line and off-line paper testing: different roles in improving quality. July 30, p. 33
————Rebuild at Sonoco's Hartsville mill increases corrugating medium output. Sept. 30, p. 48
————Scott's Mobile mill transports effluent under a creek in unique effort at pollution control. Nov. 30, p. 47
————TAPPI talks on pollution abatement focus on air tests, water treatment. July 30, p. 31
————TAPPI technical sessions focus on mill environmental problems. July 15, p. 28
————Tax credit promises boost for paper recyclers, but no major changes seen. Jan. 30, p. 52
Liu, Thomas J.—Analyzing press section clothing for maximum machine performance. April 15, p. 25
Longstaff, David—and Jess Beecher—Water treatment reduces pick-up of iron and copper in a kraft mill. Oct. 30, p. 38
Lytle, George C.—Economics of oxygen applications for the pulp and paper industry. Feb. 28, p. 25

Maltenfort, George G.—Transverse sectioning of paper via the Beloit Sheet Splitter. March 15, p. 43
Mueller, Jerome F.—Accurate electrical system reports serve as guides during expansions. Oct. 30, p. 44
Mullins, Mark—Dale Streit, and Jerry Wisinger—How to overcome close-up problems for secondary fibers mills. Dec. 15, p. 33
Munch, Erhardt E.—Jurgen Schlunke, and Wimmar Schmitz—Analyzing effects of hot calendering on the printability of coated papers. Oct. 15, p. 29

Olson, Cynthia—and John G. Penniman—Using the Britt Jar to measure drainage. April 15, p. 34

Penniman, John G.—Can SBK washing increase drainage? Aug. 15, p. 35
————Common errors in chemistry optimization. May 15, p. 37
————Controlling pitch in southern newsprint by using alum to control zeta potential. July 15, p. 32
————Electrostatic charge in recycle systems. Oct. 15, p. 37
————Identifying and quantifying 'anionic trash'. Nov. 15, p. 54
————More on the Britt Jar drainage test. Sept. 15, p. 41
————New study describes adsorption of cationic polymer on cellulose fiber. Dec. 15, p. 47
————Optimizing the process: an act of faith? June 15, p. 37
————Should additives be positively charged? Readers respond to 'cationic' column. Feb. 15, p. 40
————Three experimental procedures for optimizing coagulation chemistry. Jan. 15, p. 30
————Unique 'dryness aid': cationic guar gum. March 15, p. 62
————and Cynthia Olson—Using the Britt Jar to measure drainage. April 15, p. 34
Peterson, G. H.—Market Pulp: an industry overview. Jan. 30, p. 50
Phibbs, David P.—and Norman E. Bell—Couch vacuum: how to optimize a neglected dewatering element. Nov. 30, p. 32

Ramsden, C. J.—Paper machine developments offer new control system opportunities. Jan. 15, p. 25

Sandstrom, Erland R.—First pass fines retention critical to efficiency of wet strength resin. Jan. 30, p. 47
Schlunke, Jurgen—Erhardt E. Munch, and Wimmar Schmitz—Analyzing effects of hot calendering on the printability of coated papers. Oct. 15, p. 29
Schmitz, Wimmar—Erhardt E. Munch, and Jurgen Schlunke—Analyzing effects of hot calendering on the printability of coated papers. Oct. 15, p. 29
Scott, Jesse H.—Reducing fiber loss and consumption of water in the paper machine room (Part 1). March 30, p. 19.
————Reducing fiber loss and consumption of water in the paper machine room (Part 2). April 15, p. 29
Shapiro, Irving S.—Outlook for U.S. chemical industry. Dec. 30, p. 30
Silversides, C. R.—Perspective on forest management: will it survive as we know now it? March 30, p. 23
Smith, Vigo N.—and Peter Typpo—An industry update: state-of-the-art in on-line sensors for energy systems (Part 1). Jan. 30, p. 38
————An industry update: state-of-the-art in on-line sensors for energy systems. Feb. 15, p. 28
Streit, Dale—Jerry Wisinger, and Mark Mullins—How to overcome close-up problems for secondary fibers mills. Dec. 15, p. 33
Suarez, Rafael A. Jr.—Clevepak keeps mill at Piermont running on creative management and flair for adaptation. Oct. 30, p. 33
————Mead builds finishing operation featuring new sheeters for the Chillicothe, Ohio, mill. Oct. 30, p. 47
————S. D. Warren's Westbrook mill runs single drum winder 1:1 with coater. April 30, p. 23
————Speakers at NCASI forum urge industry to take lead in environmental debates. April 30, p. 31

Typpo, Peter—and Vigo N. Smith—An industry update: state-of-the-art in on-line sensors for energy systems (Part 1). Jan. 30, p. 38
————An industry update: state-of-the-art in on-line sensors for energy systems. Feb. 15, p. 28

Vizard, Frank—Washington mill's underground wood water pipe is repaired after 47 years of continuous use. Feb. 15, p. 26
Van Koeppen, A.—and R. Carrera—Recycling of axed waste materials while using conventional equipment. May. 15, p. 38

Wallace, Barclay W.—Controlling moisture on paper machines results in significant energy savings. Nov. 15, p. 36
Wisinger, Jerry—Dale Streit, and Mark Mullins—How to overcome close-up problems for secondary fibers mills. Dec. 15, p. 33
Worthley, Charles M.—Energy demands are cut by computer control of a mill's boiler complex (Part 1). Aug. 15, p. 23
————Energy demands are cut by computer control of a mill's boiler complex (Part 2). Aug. 30, p. 49
Wrist, Peter E.—Fundamental research—the key to future growth for the paper industry. June 30, p. 65

(*Continued from preceding page*)

International

China's ambitious modernization plan holds promises and questions for U.S.—Neal S. Lipschutz ..... 34 Oct. 15
European/Asian markets targeted as output peaks at Alabama River—Jeremiah E. Flynn ..... 34 May 30
Pakistan's locally grown kenaf shows promise in laboratory pulping tests—G. M. Bajwa and F. D. Toor ..... 28 May 15
Perspective on forest management: will it survive as we now know it?—C. R. Silversides .... 23 March 30

Labor and management

Educational 'docudrama' produced by IP warns of hazards of antitrust violations—Neal S. Lipschutz ..... 38 Dec. 15
The growing cost of health benefits—what can be done to slow the spiral?—Neal S. Lipschutz 48 March 15
Labor contracts at 180 corrugated plants expire this year; average pay hike was 9.6% in 1978 60 March 15
Paper industry wages and benefits—are the costs getting out of control?—Julian M. Kien .... 28 Feb. 28
Recovery boiler training programs offer operating and maintenance guidelines—Karen R. Boiko ..... 45 Nov. 30
'Top 50': Who's who in North American papermaking—Jessica A. Yavitz ..... 48 June 30
Workers' contract establishes unusual education fund ..... 38 Nov. 30

Maintenance

Accurate electrical system reports serve as guides during expansions—Jerome F. Mueller ..... 44 Oct. 30
Brammall's two-man crews realign damaged paper rolls, replace cores ..... 41 Feb. 15
Dual magnet system cuts grinder maintenance costs ..... 53 Nov. 15
Rectifier welders reported to cut maintenance at Federal Paper Board's Riegelwood, N.C., mill 37 Feb. 15
Truck scale eases weighing problems ..... 42 Sept. 15
Washington mill's underground wood water pipe is repaired after 47 years of continuous use—Frank Vizard ..... 26 Feb. 15

Paper and board manufacture

Analyzing effects of hot calendering on the printability of coated papers—Erhardt E. Munich, Jurgen Schlunke, and Wimmar Schmitz .... 29 Oct. 15
Analyzing press section clothing for maximum machine performance—Thomas J. Liu ..... 25 April 15
Black Clawson plans redesign of Verti-Forma—Jeremiah E. Flynn ..... Cover Feb. 15
Conditioner helps batt-on-mesh felts run clean, dry ..... 30 April 30
Couch vacuum: how to optimize a neglected dewatering element—Norman E. Bell and David P. Phibbs ..... 32 Nov. 30
Developing products to boost production (Jagenberg) ..... 27 Jan. 15
Dri Press concept: a progress report based on performance in paper mills—Allen J. Killeen 39 Nov. 30
Extrusion coating equipment handles materials from fiber glass to paper ..... 55 Nov. 15
Garden State Paper's newsprint mill uses old newspapers as raw material—Neal S. Lipschutz ..... 18 Jan. 15
German screening system saves power, cuts downtime ..... 51 Jan. 30
Reducing fiber loss and consumption of water in the paper machine room (Part 1)—Jesse H. Scott ..... 19 March 30
Reducing fiber loss and consumption of water in the paper machine room (Part 2)—Jesse H. Scott ..... 29 April 15
Relationship of winder production to the output of the paper machine—Louis J. Bagnato ... 41 Nov. 15
S. D. Warren's Westbrook mill runs single drum winder 1:1 with coater—Rafael A. Suarez Jr. 23 April 30
Turbulence on forming board may be critical, but often is inadequate: Kallmes ..... 35 June 15

Primary & secondary fibers

Garden State Paper's newsprint mill uses old newspapers as raw material—Neal S. Lipschutz ..... 18 Jan. 15
Georgia-Pacific grows hybrid poplars for fuel or paper ..... 36 Oct. 30
How to overcome close-up problems for mills that use secondary fibers—Dale Streit, Jerry Wisinger, and Mark Mullins ..... 33 Dec. 15
Pakistan's locally grown kenaf shows promise in laboratory pulping tests—G. M. Bajwa and F. D. Toor ..... 28 May 15
Perspective on forest management: will it survive as we now know it?—C. R. Silversides .... 23 March 30

Process controls and instrumentation

An industry update: state-of-the-art in on-line sensors for energy systems (Part 1)—Vigo N. Smith and Peter Typpo ..... 38 Jan. 30
An industry update: state-of-the-art in on-line sensors for energy systems (Part 2)—Vigo N. Smith and Peter Typpo ..... 28 Feb. 15
Domtar classifier accurately measures thickness and length of wood chips—A. Lapointe .... 28 April 30
Increased automation in trimming lines saves time and labor at Brokaw, Wis., mill ..... 31 July 15
On-line and off-line paper testing: different roles in improving quality—Neal S. Lipschutz 33 July 30
Optical flow transmitters can accurately measure and control pulp feed—Jeremiah E. Flynn .. 29 March 30
Paper machine developments offer new control system opportunities—C. J. Ramsden ..... 25 Jan. 15
Screening of pulpwood chips for quality and profit—J. V. Hatton ..... 25 April 30
Transverse sectioning of paper via the Beloit Sheet Splitter—George G. Maltenfort ..... 43 March 15
Vapor sensor monitors safety levels and cuts cost of coating operation ..... 36 Dec. 15
Water treatment reduces pick-up of iron and copper in a kraft mill—David Longstaff and Jess Beecher ..... 38 Oct. 30

Pulping and bleaching

Alkaline pulping sessions feature closed-cycle bleaching and TMP—Karen R. Boiko ..... 30 Jan. 30
Can energy costs for TMP and RMP be reduced?—Joseph A. Kurdin ..... 23 June 15
Economics of oxygen applications for the pulp and paper industry—George C. Lytle ..... 25 Feb. 28
First oxygen pulping/bleaching seminar draws high attendance, good papers—Karen R. Boiko ..... 20 Feb. 28
Polyvinylidene fluoride proves to be efficient bleach plant corrosion fighter ..... 38 Feb. 15
TMP as the sole mechanical pulp for newsprint and magazine grades—Nils Hartler ..... 45 Dec. 15
Update on lime sludge kilns in the pulp mill environment (Part 1)—Douglas J. Kramm .. 23 May 15
Update on lime sludge kilns in the pulp mill environment (Part 2)—Douglas J. Kramm .. 52 May 30
Update on lime sludge kilns in the pulp mill environment (Part 3)—Douglas J. Kramm .. 28 June 15

Miscellaneous

Discussion of adhesives and shipping mark packaging program in Nashville—Neal S. Lipschutz ..... 40 Dec. 15
Fundamental research—the key to future growth for the paper industry—Peter E. Wrist ..... 65 June 30
Kroeschell assumes TAPPI presidency at annual meeting ..... 27 April 30
Mead chairman James McSwiney named Papermaker of the Year—Karen R. Boiko ..... Cover Dec. 15